

The human side of invasive species

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FERAL HOGS (*Sus scrofa*) are one of the most visible, troublesome, and interesting invasive species in North America. They have existed in North America probably since 1493 when Christopher Columbus purportedly released some hogs in the West Indies. Since then, hogs have spread across the continent and increased substantially in number. Today, feral hogs are both numerous and widespread throughout North America (Gipson et al. 1998, Adkins and Harveson 2007, Fogarty 2007, Mersinger and Silvy 2007), and published estimates suggested a U.S. population of between 1 and 2 million feral hogs (Mayer and Brisbin 1991).

If ever there existed a large, charismatic vertebrate in North America that could be labeled a pest, it is the feral hog. Aside from some recreational value for hunters, feral hogs in North America offer almost no benefit; yet, they cause many problems (Rollins et al. 2007). We know that hogs disrupt the ecosystem, compete with native wildlife, damage agricultural and timber resources, cause hazards to humans on roadways, and, via their role as a disease host, pose a health risk to both humans and livestock (Hartin et al. 2007, Kaller et al. 2007). Quite simply, there are not many nice things that one can say about feral hogs.

The management of feral hogs in many areas, particularly in Mississippi, is a great example of the complexity of managing human–wildlife conflicts. In his book, *Resolving Human–Wildlife Conflicts*, Conover (2001) suggested that all human–wildlife conflicts are comprised of 3 ingredients: an animal or animals causing damage, a resource or object being damaged, and a person or people being adversely



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affected. If one wishes to examine this model, the management of feral hogs in the Mississippi Alluvial Valley (MAV) provides an excellent case study.

The MAV, or the Mississippi Delta, as it is colloquially known, is the floodplain and valley of the lower Mississippi River. The MAV extends from the confluence of the Mississippi and Ohio rivers southward to the Gulf of Mexico.

The region is a patchwork of agricultural fields, mature bottomland hardwoods, abandoned fields, rivers, oxbow lakes, small towns, levees, state and federal lands, and hunting camps. This fragmented landscape represents exceptional habitat for feral hogs, which thrive there in abundance.

Wildlife professionals in Mississippi have, for years, preached the evils of feral hogs, particularly in the MAV. Strangely, though, landowners and residents in the MAV have not worried much about the hogs in the past. In fact, many farmers and landowners would have reported that they enjoy the hunting opportunities offered by the hogs and did not mind sharing space with them. During the past few decades, the agricultural lands and waters in the MAV have been reserved mostly for cotton and catfish production. Indeed, the region has been one of the nation's greatest producers of these commodities for a long time. Even a hog, which will eat almost anything, must be pretty hungry to eat a cotton boll, nor has it yet mastered the art of fishing. So, the management of hogs problems in the MAV has been a relatively unimportant issue for local farmers.

Two or 3 years ago, however, things started changing in the MAV. First, in partial response

to the new ethanol fuel initiatives, corn prices started rising and reached levels never before attained. This, in combination with stagnant or declining cotton prices, induced many MAV farmers to switch their production from cotton to corn. Higher corn prices led to higher catfish feed prices in the United States, and this, combined with competition from fish grown in Asia, has led to the demise of many catfish operations, which have responded by draining ponds and planting soybeans. In just a few years, farmers in the MAV became much, much more involved in the production of corn and soybeans.

Guess what? Hogs like to eat corn and soybeans—a lot. Suddenly, farmers and landowners in the MAV worry about hogs—a lot. In the past 6 months, all the major agencies and organizations in Mississippi that deal with agriculture and wildlife have gotten on the hog bandwagon. Many meetings have been held among the state's agricultural commission, wildlife agency, land-grant university, agricultural interest groups, federal agencies owning land in the MAV, and others; still other meetings are scheduled to occur in the next few months. All of a sudden, people and resources are being tasked with managing feral hogs in the MAV.

What changed? Certainly not the hogs, which have simply continued to do what hogs do: eat and reproduce. The real linchpin in this situation has been farmers' production practices, and their new attitudes about hogs. Before this recent shift in agricultural practices occurred, educational programs designed to teach landowners about the evils of hogs fell on deaf ears. Now, however, farmers are clamoring to learn more about managing the hogs on their farms. A recent workshop about feral hog management sponsored by the Mississippi Extension Service had standing-room-only, and many requests for subsequent workshops followed.

So, Conover's (2001) model for what creates human-wildlife conflicts is confirmed. In coping with the problems caused by invasive species, wise managers will consider the animals, but also the humans involved in the equation. By so doing, perhaps we can be better equipped to succeed when tomorrow's crisis occurs.

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